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Bulbils and proembryo of *Lamprothamnus*.—Miss McNICOL³¹ has been cultivating *Lamprothamnus alopecuroides*, one of the Characeae, for several years, the plants producing an abundant supply of antheridia and oogonia. Very few of the oospores seemed capable of germination, and proembryos produced from them resemble those produced from the underground nodes. For the most part, reproduction takes place by means of proembryos that are formed on the rhizoid-nodes and make use of the starch stored in the tubercles, which arise either directly or as transformed rhizoids.—J. M. C.

Semipermeable membrane of grass seeds.—BROWN³² has published a preliminary account of a semipermeable membrane which incloses the grain of *Hordeum*, which permits the passage of water and iodine, but prevents the passage of sulfuric and hydrochloric acids and all salts of metals examined, when in aqueous solution. The semipermeable property is not due to the action of living protoplasm and is located in the "spermoderm" of the grain. The same covering occurs in grains of *Avena*, *Triticum*, and *Secale*. If these observations are correct, the "spermoderm" is a most remarkable structure.—J. M. C.

Synapsis and synizesis.—Following McCLUNG, SCHAFFNER³³ uses the term synizesis to describe the familiar contracted condition of the chromatin usually described as synapsis; while he reserves the term synapsis in a very restricted sense as applying to the chromatin fusions which take place during the contracted state. The synizetic knot is not always around or in contact with the nucleolus, and while usually lateral it is often central in position. SCHAFFNER'S figures show that the synizetic knot has no relation to gravity.—CHARLES J. CHAMBERLAIN.

Excentric growth.—URSPRUNG³⁴ records experiments calculated to throw some light on the cause of excentric growth of stems. Seedlings of *Ricinus* fixed in a horizontal position showed an excentric growth of the hypocotyl, with mechanical cells in the upper part and large thin-walled cells in the lower part. The reason for these appearances is not clear, for it has been shown that mere tension, such as would result in the present instance from the turgescence of the cells on the lower side, does not result in the production of mechanical tissue.—M. A. CHRYSLER.

Growth of lignified cell walls.—It is usually assumed that lignified cell walls, such as those of tracheids, are incapable of further growth. But this idea

³¹ McNICOL, MARY, The bulbils and proembryo of *Lamprothamnus alopecuroides* A. Braun. *Annals of Botany* 21:61-70. *pl.* 8. 1907.

³² BROWN, A. J., On the existence of a semipermeable membrane enclosing the seeds of some of the Gramineae. *Annals of Botany* 21:79-87. 1907.

³³ SCHAFFNER, J. H., Synapsis and synizesis. *Ohio Naturalist* 7:41-48. *pl.* 4. 1907.

³⁴ URSPRUNG, A., Beitrag zur Erklärung des excentrischen Dickenwachstums an Krautpflanzen. *Ber. Deutsch. Bot. Gesells.* 24:498-501. 1906.